Department of Energy
Washington, DC 20585

March 16, 1999

Mr. James Powers
Weldon Spring Site
M.K. Ferguson
7295 Highway, 94 South
St. Charles, Missouri 63304

Dear Mr. Powers:

This is in follow-up to the former Assistant Secretary for Environment, Safety and Health's April 11, 1996, response to your requests for exemption from certain provisions contained in Title 10 Code of Federal Regulations, Part 835 (10 CFR 835), "Occupational Radiation Protection."

You requested exemptions due to inherent problems in conducting dose assessments, performing real-time air monitoring, and posting and personal monitoring for radon, thoron, and their progeny. In response to your request, you were granted, with conditions, a set of exemptions intended to permit a practical application of the system of radiation protection provided in 10 CFR 835 to exposure of Department of Energy (DOE) workers from radon, thoron, and their progeny.

The intent of the Department's April 11, 1996, response was to provide interim relief and guidance until the Department revised the specific provisions for which the exemptions were granted. On November 4, 1998, the Department published an amendment to 10 CFR 835 in the Federal Register. Some of the provisions for which you were granted exemption have been revised such that: 1) An exemption is no longer needed or 2) your exemption decision needs to be revised to be consistent with the amended rule.

I am enclosing a table of revisions for your exemption decision. This table should be kept with the original exemption decision. The original technical position accompanying the exemption decision and the conditions specified in the exemption decision remain in effect.

Sincerely,

David Michaels, PhD, MPH
Assistant Secretary
Environment, Safety and Health

Enclosure

cc w/enclosure:
James M. Owendoff
Keith Christopher
James C. Hall, Oak Ridge
Operations Office

Update of April 11, 1996, Exemption Decision for Weldon Spring Site
M. K. Ferguson

Original Exemption	Revision	New Exemption
§835.(1)(b)(4)	(b)(4) was revised to (b)(6)	§835.(1)(b)(6)
§835.2(a)	The definitions in the exemption decision were revised with no effect on the exemption decision.	§835.2(a)
§835.4	Provision was modified with no effect on exemption decision.	§835.4
§835.202(c)	Provision was modified with no effect on exemption decision.	§835.202(c)
§835.402(c)(1)	Provision was modified with no effect on exemption decision.	§835.402(c)(1)
§835.403(a)(1)	Provision was modified with no effect on exemption decision.	§835.403(a)(1)
§835.702(c)(4)(iii)	Provision was modified such that an exemption is no longer necessary.	None
Appendix C	Provision was modified such that an exemption is no longer necessary.	None

The original technical position accompanying the exemption decision and the conditions specified in the exemption decision remain in effect.

David Michaels, PhD, MPH
Assistant Secretary
Environment, Safety and Health

3-16-99

Date

Department of Energy
Washington, DC 20585

April 11, 1996

Mr. James Powers
Weldon Spring Site
M.K. Ferguson
7295 Highway, 94 South
St. Charles, Missouri 63304

Dear Mr. Powers:

This letter responds to your set of seven requests for exemption from certain provisions contained in Title 10, Code of Federal Regulations, Part 835 (10 CFR 835), "Occupational Radiation Protection." Specifically, this exemption concerns your request for exemption from certain provisions contained in sections 1, 2, 4, 202, 402, 403, 603, 702 and Appendix C of 10 CFR 835. The purpose of the exemption request is to obtain relief from inherent problems in conducting dose assessments, performing real-time air monitoring, and posting and personal monitoring for radon, thoron, and their progeny.

In response to your request and on the additional information you provided as a result of our respective staff's February 27, 1996, telephone conversation, I grant, with conditions, a set of exemptions to 10 CFR 835. Below is a summary of the exemptions granted and exemption denied. The exemptions granted include provisions not included in the exemption request due to their direct application to the relief granted. The technical position accompanying the transmittal letter forwarding this decision discusses the rational for granting and denying specific provisions and contains the terms and conditions of the exemptions granted.

Exemptions granted

§835.(1)(b)(4), §835.2(a), §835.4, §835.202(c), §835.402(c)(1), §835.403(a)(1), §835.702(c)(4)(iii), and Appendix C.

Exemption denied

§835.603(d).

This set of exemptions and clarifications is intended to permit a practical application of the system of radiation protection provided in 10 CFR 835 to exposure of Department of Energy (DOE) workers from radon, thoron, and their progeny and thus provide relief from regulatory problems with the control of occupational exposure to radon, thoron, and their progeny. The details of this set of exemptions, conditions, and clarifications are contained in the enclosed technical position and are summarized below.

Exemptions are provided to permit the following actions (note that the following set of exemptions and clarification apply only to exposure from radon, thoron, and their progeny):

- Raising the monitoring threshold for radiation workers exposed to radon, thoron, and their progeny from 100 mrem to 500 mrem. The 500 mrem monitoring threshold includes background sources of radon, thoron, and their progeny;

- raising the criterion for air sampling from 2% of an annual limit on intake (ALI) to 10% of an ALI;

- permitting the use of the units Working Level (WL) and Working Level Month (WLM) in official records and reports;

- eliminating the requirement to record intake resulting from exposure to radon, thorn, and their progeny; and

- modification of the definitions of controlled area, radiation worker, and background radiation to achieve consistency with the 500 mrem monitoring criteria.

The analysis of each exemption request, a list of the specific provisions for which the exemptions are granted and the associated conditions, the technical basis for each decision and the details of the technical clarifications are contained in the enclosures accompanying this letter.

The intent of this response is to provide interim relief and guidance until the Department revises regulatory provisions pertaining to the specific provisions for which the exemptions are granted. DOE will continue monitoring the status of new recommendations, including those contained in the International Committee on Radiological Protection Publication 65, and amend its regulations when appropriate.

Pursuant to 10 CFR 820.66, M.K. Ferguson, Weldon Spring Site (WSS), has 15 days from the date of the filing of this decision to file a Request to Review with the Secretary. The Request to Review shall state specifically the respects in which the exemption determination is claimed to be erroneous, the grounds of the request, and the relief requested. If no Request to Review is submitted, the exemption decision becomes a Final Order 15 days after it is filed.

The DOE Office of Environmental Management staff concur with this response.

Sincerely,

Tara O'Toole, M.D., M.P.H.
Assistant Secretary
Environment, Safety and Health

2 Enclosures

cc w/enclosures:
See enclosed list

Distribution:

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Technical Position

Radon/Thoron
Title 10, Code of Federal Regulations, Part 835 (10 CFR 835)
Exemption Requests

M.K. Ferguson, the contractor for the Weldon Spring Site Remedial Action Project (WSSRAP) seeks relief from various requirements contained in 10 CFR 835, "Occupational Radiation Protection," for monitoring, reporting, and posting of areas associated with occupational exposure to radon and/or thoron and their progeny. The Office of Environment, Safety and Health previously issued exemption decisions for similar exemption requests from four other contractors: the Formerly Utilized Sites Remedial Actions Programs (FUSRAP) (contractor: Bechtel National, Inc.), Uranium Mill Tailings Remedial Act (UMTRA) (contractor: M.K. Ferguson), Grand Junction Program Office (GJPO) (contractor: RUST/Geotech, Inc.), and Fernald Environmental Remediation Management Corporation (FERMCO). As discussed below, consistent with the response to the previous four contractors, relief from specific provisions of 10 CFR 835 is justified; other relief is not justified. The Office of Worker Protection Programs and Hazards Management recommends providing exemption to those sections of 10 CFR 835 as specifically discussed in this technical position. These exemptions would no longer be effective when the Department of Energy (DOE) revised regulatory provisions pertaining to the specific provisions for which the exemptions are granted.

Discussion of Exemption Requests

General

The contractor for the WSSRAP submitted seven requests for exemption from various provisions in 10 CFR 835, which deal directly with inherent problems in posting, record keeping, and personal monitoring for radon and/or thoron, and their progeny.

Requirements From Which Exemption is Sought

§835.1(b)(4) The requirements of this part do not apply to: Background radiation, radiation doses received as a patient for the purposes of medical diagnosis or therapy, or radiation doses received from voluntary participation in medical research programs.

Controlled Area means any area to which access is managed in order to protect individuals from exposure to radiation and/or radioactive material. Individuals who enter only the controlled area without entering radiological areas are not expected to receive a total effective dose equivalent of more than 100 mrem (0.001 sievert) in a year.

Radiological worker means a general employee whose job assignment involves operation of radiation producing devices or working with radioactive materials, or who is likely to be routinely occupationally exposed above 0.1 rem (0.001 sievert) per year total effective dose equivalent.

§835.4 Unless otherwise specified, the quantities used in the records required by this part shall be clearly indicated in special units of curie, rad, or rem, including multiples and subdivisions of these units. The SI units, becquerel (Bq), gray (Gy), and sievert (Sv), are only provided parenthetically in this part for reference with scientific standards. These SI units are not authorized for use in records required under this part.

NOTE: Although units working level (WL) are not discussed in this paragraph, Appendix D does specify their use and is, therefore, an acceptable unit under this provision.

§835.202(c) Exposures from background, therapeutic and diagnostic medical radiation, and voluntary participation in medical research programs shall not be included in dose records or in the assessment of compliance with the occupational exposure limits.

§835.402(c) For the purpose of monitoring individual exposures to internal radiation, internal dose evaluation programs (including routine bioassay programs) shall be conducted for:

(1) Radiological workers who, under typical conditions, are likely to receive 0.1 rem (0.001 sievert) or more committed effective dose equivalent, and/or 5 rems (0.05 sievert) or more committed dose equivalent to any organ or tissue, from all occupational radionuclide intakes in a year.

§835.403(a) Measurements of radioactivity concentrations in the ambient air of the workplace shall be performed as follows:

(1) Air sampling shall be performed in occupied areas where, under typical conditions, an individual is likely to receive an annual intake of 2 percent or more of the specified annual limit on intake (ALI) values. For a given radionuclide and lung retention class, the ALI is the product of the derived air concentration (DAC) listed in Appendix A of this part and the constant 2.4×10^9 mL. Samples shall be taken as necessary to detect and evaluate the level or concentration of airborne radioactive material at work locations.

§835.603 Each access point to a radiological area (as defined in §835.2) shall be posted with conspicuous signs bearing the wording provided in this section.

(d) Airborne Radioactivity Area. The words "Caution, Airborne Radioactivity Area" shall be posted for any occupied area in which airborne radioactivity levels exceed, or are likely to exceed, 10 percent of the DAC value listed in Appendix A or Appendix C of this part.

§835.702(c) The records required by this section shall:

(4) Include the following quantities for the summation of the external and internal dose:

(iii) Cumulative total effective dose equivalent received from external and internal sources while employed at the site or facility, since January 1, 1989.

Results of Analysis

Discussion

The following specific issues were raised in WSSRAP's exemption requests:

Due to the difficulty in differentiating between occupational and background exposure from radon (Rn-222) and/or thoron (Rn-220) and their progeny, WSSRAP requests an exemption from the requirement to monitor individual's exposure to internal radiation based upon their likelihood to receive 0.1 rem committed effective dose equivalent (CEDE). WSSRAP requests the monitoring threshold be raised to 0.5 rem CEDE.

Consistent with raising the threshold for monitoring internal exposure to 0.5 rem, WSSRAP requests an exemption from the requirement that exposures from background radiation not be included in dose records or in the assessment of compliance with the occupational dose limits.

WSSRAP requests an exemption from conducting air sampling in occupied areas where an individual is likely to receive an annual intake of 2 percent or more of the specified ALI values. WSSRAP proposes to conduct air sampling in occupied areas where an individual is likely to receive an annual intake of 10 percent or more of the specified ALI values, which is consistent with raising the threshold for monitoring internal exposure to 0.5 rem.

WSSRAP requests exemption from the definitions of "Controlled Area" and "Radiological Area" to reflect the increased monitoring threshold of 0.5 rem CEDE.

WSSRAP requests an exemption from posting an airborne radioactivity area based on exceeding 10 percent of the DAC (radon and/or thoron and their progeny only). WSSRAP requests that posting of airborne radioactivity areas be based on 50 percent of the DAC (radon and/or thoron and their progeny only).

WSSRAP requests an exemption from the requirement to use the units of curie, rad, or rem in records. WSSRAP requests to use the special unit of Working Level Months (WLMs) as they pertain to exposure to radon and/or thoron and their progeny.

Radon and thoron and their progeny present unique problems associated with occupational radiation protection. The Radiological Control Coordinating Committee (RCCC) Subcommittee on Radon reviewed and documented six issues associated with radon monitoring. These issues are discussed in Appendix A of

this document. One of these issues is that unlike other occupational exposure received while conducting DOE activities, radon and thoron are present in natural background. The concentrations of radon and thoron occurring in background vary with a variety of environmental factors, the time of day, and the time of year. This creates technical difficulties in differentiating occupational exposure from background exposure at sites where radon and thoron are present due to current or previous DOE activities. Several contractors (FUSRAP, UMTRA, GJPO, and FERMCO) have requested and have been granted exemptions from various provisions in 10 CFR 835 because of these problems.

Concurrence

One issue that must be resolved in order to ensure that compliance can be achieved with the provisions of 10 CFR 835 involves the difficulty in differentiating between background and occupational exposure to radon and/or thoron and their progeny. Relief from monitoring requirements must be provided in recognition of a technology shortfall of current instrumentation and monitoring techniques in being able to distinguish background levels of radon and/or thoron from levels created as a result of DOE activities.

This issue is addressed for radiological workers by including background contributions in occupational exposure to radon and/or thoron and their progeny and changing appropriate thresholds contained in 10 CFR 835 from 100 mrem to 500 mrem CEDE. To be more precise and considering that exposure to radon and/or thoron is more typically measured in WLM, the thresholds are raised to 0.4 WLM for radon and 1.2 WLM for thoron. These thresholds include:

- Designating and posting controlled areas (10 CFR 835.2(a) and §835.603);
- classifying individuals as radiological workers (§835.2(a));
- monitoring radiological workers for internal exposure (§835.401(a)(1) and 402(c)); and
- air sampling (§835.403(a)(1)) [requirement stated in percent of ALI].

The 500 mrem threshold includes all contributions from sources of radon and/or thoron and their progeny including background.

The following exemptions should be granted for the following reasons:

1. Exclusion of background levels of radon and/or thoron and their progeny [§§835.1(b)(4), 2(a), and 202(c)]:

   Due to the diurnal, geographic, and seasonal variations in background levels of radon, thoron, and their progeny, differentiating occupational levels from background levels is impractical. Accordingly, for the purpose of determining occupational exposure of individuals from radon or thoron and their progeny, background levels of these radionuclides will not be excluded from individual occupational exposure monitoring results.

Exposure to background levels of radon and/or thoron and their progeny in the controlled area will be considered to be part of an individual's occupational exposure under this exemption.

2. Airborne radioactivity area definition [§835.2(a)]:

The definition for airborne radioactivity area is modified to mean any area where the measured concentration of airborne radioactivity, above natural background for all radionuclides except radon and/or thoron and their progeny, exceeds or is likely to exceed 10 percent of the DAC values listed in Appendix A or Appendix C of this part.

This definition was modified as a result of including background radon and/or thoron exposures with occupational exposures to radon and/or thoron. Although exemption from this provision was not addressed in the exemption request, this provision is included due to its direct application to the relief granted.

3. Controlled area definition [§835.2(a)]:

The definition for controlled area is modified to mean any area to which access is managed in order to protect individuals from exposure to radiation and/or radioactive material. Individuals who enter only the controlled area without entering radiological areas are not expected to receive a total effective dose equivalent of more that 100 mrem (0.001 sievert) in a year from sources other than occupational exposure to radon and/or thoron and their progeny. Individuals who enter only the controlled area without entering radiological areas are not expected to receive a committed effective dose equivalent of more that 500 mrem (0.005 sievert) in a year from exposure to radon and/or thoron and their progeny. Posting requirements would conform with these modified conditions. Minors and members of the public are still required to meet the 100 mrem total effective dose equivalent dose limit.

This definition was modified as a result of including background radon and/or thoron exposures with occupational exposures to radon and/or thoron. In addition, background for the entire site must be considered when determining occupational exposure to radon and/or thoron under this exemption. Background levels of radon and/or thoron at the site are expected to be greater than 100 mrem in one year. Therefore, if the definition had not been modified, the site would have been required to be posted as a radiological area (i.e., radiation area or airborne radioactivity area) with appropriate access and administrative controls. The elevated exposure limit for exposure to radon and/or thoron in the modified definition provides relief to contractors for this requirement.

4. Occupational exposure definition [§835.2(a)]:

The definition for occupational exposure is modified to mean an individual's exposure to ionizing radiation (external and internal) as a result of that individual's work assignment. Occupational exposure does not include planned special exposures, exposures received as a medical patient, background radiation (except for radon and/or thoron and their progeny), or voluntary participation in medical research programs.

This definition was modified as a result of including background radon and/or thoron exposures with occupational exposures to radon and/or thoron. Although exemption from this provision was not addressed in the exemption request, this provision is included due to its direct application to the relief granted.

5. Radiological worker definition [§835.2(a)]:

The definition of a radiological worker is modified to mean a general employee whose job assignment involves operation of radiation producing devices or working with radioactive materials, or who is likely to be routinely occupationally exposed above 100 mrem (0.001 sievert) per year total effective dose equivalent from sources other than radon and/or thoron and their progeny. For exposures to radon and/or thoron and their progeny, the routine exposure is likely to exceed 500 mrem (0.005 sievert) per year committed effective dose equivalent.

6. Monitoring of radiological workers to demonstrate compliance with the occupational exposure limits [§835.402(c)(1)]:

Consistent with the discussion regarding technical difficulties associated with differentiating occupational exposure from background levels of radon and/or thoron and their progeny, the threshold for monitoring radiological workers' exposure to radon and/or thoron and their progeny is raised to 500 mrem CEDE (0.4 WLM for radon and 1.2 WLM for thoron). This is consistent with monitoring thresholds under U.S. Nuclear Regulatory Commission radiation protection regulations. The monitoring threshold of 5 rem committed dose equivalent has not been modified since the 500 mrem CEDE threshold is more restrictive; the corresponding committed dose equivalent to the lungs would be 4.17 rem. As noted previously, this threshold includes background.

The 500 mrem CEDE monitoring threshold for radiological workers' exposure to radon and/or thoron is independent of the 100 mrem CEDE threshold for all other radionuclides. Therefore, if the radiological worker is exposed to radon and/or thoron and other radionuclides during the year, the 500 mrem CEDE monitoring threshold would apply only to radon and/or thoron and the remaining radionuclides would have a 100 mrem CEDE monitoring threshold.

7. Air sampling requirements [§835.403(a)(1)]:

Consistent with the monitoring threshold, the air sampling threshold for radon and/or thoron and their progeny is raised from 2 percent ALI to 10 percent ALI. These levels correlate with 100 mrem and 500 mrem CEDE, respectively. To be consistent with the terminology and quantities used when measuring exposure to radon and/or thoron, the monitoring threshold is raised to 0.4 WLM for radon and 1.2 WLM for thoron.

The 500 mrem CEDE air sampling threshold for exposures to radon and/or thoron is independent of the 100 mrem CEDE threshold for all other radionuclides. Therefore, if a mixture of radon and/or thoron and other

airborne radionuclides existed, the 500 mrem CEDE monitoring threshold would apply only to radon and/or thoron and the remaining mixture would have a 100 mrem CEDE monitoring threshold.

8. Requirements for individual monitoring records and use of radiological units [§§835.4, and 702(c)(4)(iii)]:

   The exposure to radon or thoron and their progeny present unique challenges towards meeting the requirement to record estimated intake. Since radon and thoron exposure is typically reported in terms of WLMs, the Department recognizes this as an acceptable surrogate for the estimated intake for compliance with §835.702(c)(4)(iii). The requirements of §835.702(c)(4)(i) and (ii) remain unchanged. The selection of an equilibrium factor is left to the contractor, but technical justification must be provided.

   The DOE also recognizes the use of WLMs as an acceptable unit for radon and/or thoron exposure monitoring. Accordingly, when reporting the internal dose evaluation results from radon and/or thoron exposures, the estimated intake would be reported in units of WLMs. Any internal doses would be included in the determination of total effective dose equivalent (§835.202(a)(1)) and total organ dose equivalent (§835.202(a)(2)).

9. DAC for Workers from External Exposure During Immersion in a Contaminated Atmospheric Cloud [Appendix C]: The DOE recognizes that immersion DAC, for Rn-220 and Rn-222 were erroneously included in Appendix C of 10 CFR 835. To preclude any confusion, the need to evaluate occupational exposure to radon and thoron based on this appendix is not required.

   Although exemption from this provision was not addressed in the exemption request, this provision is included due to its direct application to the relief granted.

The above exemptions meet the criteria for granting a permanent exemption under 10 CFR 820.62:

1. Granting these exemptions would be authorized by law.

2. These exemptions would not present an undue risk to public health and safety, the environment, or facility workers.

3. The exemptions would be consistent with the safe operation of a DOE nuclear facility.

4. In granting these exemptions pursuant to §820.62(d)(2), the DOE recognizes that special circumstances exist where the application of the requirements discussed, above, because the application of these requirements in the case of occupational exposure to radon or thoron and their progeny would not serve the underlying purpose of the stated requirements and such compliance would result in resource impacts, which are not justified by the safety improvements.

The following exemption request should be denied for the reasons stated:

Posting of airborne radioactivity areas [§835.603(d)]:

WSSRAP requested an exemption from posting an airborne radioactivity area based on exceeding 10 percent of the DAC (radon and/or thoron and their progeny only). In support of this request, WSSRAP proposed posting of airborne radioactivity areas be based on 50 percent of the DAC (radon and/or thoron and their progeny only). As justification for granting this request, WSSRAP notes that they generally have required respirator use for individuals entering posted airborne radioactivity areas. WSSRAP would like to raise the threshold for requiring use of respirators to 50 percent of the DAC for radon and/or thoron. In order to avoid worker confusion regarding the use of respirators, WSSRAP would like to raise the threshold for posting airborne radioactivity areas to 50 percent of the radon and/or thoron DAC and thus continue their practice using respirators in all posted airborne radioactivity areas.

Title 10 CFR 835 does not mandate situations (e.g., while in posted airborne radioactivity areas) requiring the use of respiratory protection devices. An exemption from 10 CFR 835 is not needed for WSSRAP to raise their threshold for use of respirators to 50 percent of the radon and/or thoron DAC.

This exemption request does not meet the criteria for granting an exemption under 10 CFR 820.62, in that WSSRAP did not demonstrate that special circumstances exist where the application of the requirements discussed above would not serve the underlying purpose of the stated requirements and such compliance would result in resource impacts, which are not justified by the safety improvements. Appropriate instruction and explanation could be provided to the workers if WSSRAP raises the threshold for use of respirators to 50 percent of the radon and/or thoron DAC.

Accordingly, the posting of airborne radioactivity areas corresponding to 10 percent of the DAC for occupational exposure to radon or thoron remains unchanged.

Appendix

Radiological Control Coordinating Committee Subcommittee on Radon

Six issues were raised by the RCCC Subcommittee on Radon regarding occupational exposure to radon and thoron and their progeny. These issues are:

1. There is no bioassay for radon and thoron and their progeny.

2. Doses are not currently being assigned for occupational exposure to radon, thoron, and their progeny.

3. Compliance with 10 CFR 835 has not been achieved for the requirements for monitoring, dose assessment, records, and reporting.

4. There is significant debate on the validity of DOE's current DAC for radon and thoron. The new International Commission Radiological Protection (ICRP) limits (dose conversion convention) suggest that DOE's DAC is 2.5 times too low. A factor of 2.0 is supported by the National Academy of Sciences'(NAS) 1988 Biological Effects of Ionizing Radiation (BEIR IV) report (now dated). ICRP is maintaining their current position presented in ICRP Publication 65. The International Atomic Energy Agency (IAEA) has published IAEA Safety Series No. 115-I, which contains recommendations on thoron and endorses the ICRP 65 recommendations on radon. The NAS has convened BEIR VI to further study this issue.

5. Monitoring for exposure to radon, thoron, and their progeny is impractical at 1 percent and 2 percent of current DAC (⅛ WL = 3E-08 μCi/mL equilibrium equivalent radon concentration = 30 pCi/L), as required for members of the public visitors and radiological workers, respectively.

   The determination of background is a problem, since it fluctuates diurnally and seasonally, and is comparable to the trigger levels for monitoring.

6. Guidance from DOE is needed for:

   - Conversion of pCi/L and time, or WLM, to dose; and
   - Choice of default values of equilibrium factors.

EXEMPTION DECISION

Pursuant to title 10, Code of Federal Regulations, part 820.61 (10 CFR 820.61), the Assistant Secretary for Environment, Safety and Health (EH-1) is authorized to exercise authority on behalf of the Department of Energy (DOE) with respect to requests for exemptions from nuclear safety rules relating to radiological protection of workers, the public, and the environment.

M.K. Ferguson, the contractor for the Weldon Spring Site Remedial Action Project (WSSRAP), filed a request with the Department for an exemption from certain requirements contained in 10 CFR 835, "Occupational Radiation Protection," for monitoring, reporting, posting, and assessing dose from occupational exposure to radon and/or thoron, and their progeny. The request states that the exemption is authorized by law; will not present undue risk to the public health and safety, the environment, or facility workers; and is consistent with the safe operation of a DOE nuclear facility. In addition, WSSRAP, has demonstrated that the exemption request meets the special circumstances provided in 10 CFR 820.62.

Based on a review of the supporting documentation, relief from specific provisions of 10 CFR 835 are justified; other relief is not justified. Below is a summary of the exemptions granted and exemption denied. The technical position accompanying the transmittal letter forwarding this decision discusses the rational for granting and denying specific provisions and contains the terms and conditions of the exemptions granted.

Exemptions granted

§835.(1)(b)(4), §835.2(a), §835.4, §835.202(c), §835.402(c)(1), §835.403(a)(1), §835.702(c)(4)(iii), and Appendix C.

Exemption denied

§835.603(d).

Based on the foregoing, I hereby approve the WSSRAP, Request for Exemption, on a permanent basis commencing on the date of signature set forth below subject to the following conditions:

- WSSRAP utilizes the revised definitions for airborne radioactivity areas, controlled areas, occupational exposures, and radiological workers;
- for the purpose of determining occupational exposure of individuals from radon and thoron, WSSRAP does not exclude background levels of these radionuclides from individual occupational exposure monitoring results; and
- WSSRAP utilizes the revised thresholds for monitoring radiological worker's exposure to radon and thoron and their progeny of 500 mrem committed effective dose equivalent, and the revised air sampling threshold of 10 percent annual limit on intake.

These exemptions will no longer be effective when the Department revises regulatory provisions pertaining to the specific provisions for which the exemptions are granted.

Tara O'Toole, M.D., M.P.H.
Assistant Secretary
Environment, Safety and Health

4-10-96
Date